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CENTRAL INTELLIGENCE AGENCY

WASHINGTON, D.C. 20505

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2 October 1973

MEMORANDUM FOR: The Director of Central Intelligence

SUBJECT : MILITARY THOUGHT (USSR): Conventional Soviet Long Range Air Force Operations Against Enemy Air Bases

1. The enclosed Intelligence Information Special Report is part of a series now in preparation based on the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". This article discusses the tactics of the Soviet Long Range Air Force against enemy air bases under conventional warfare conditions. The only aircraft mentioned is the TU-16, in both bomber and missile-carrying variants. Some of these aircraft have nuclear loads and are concealed for the eventuality of transition to nuclear warfare. Assuming the dawn and twilight hours to be the most favorable times for attack, the author elects to attack at twilight, when only a few crews are on duty to mount a counterattack. This article appeared in Issue No. 2 (87) for 1969.

2. Because the source of this report is extremely sensitive, this document should be handled on a strict need-to-know basis within recipient agencies.

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William E. Nelson
Deputy Director for Operations

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DIRECTORATE OF OPERATIONS

Intelligence Information Special Report

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COUNTRY USSR

DATE OF INFO. Mid-1969

DATE 2 Oct 1973

SUBJECT

MILITARY THOUGHT (USSR): The Defeat of Enemy Aviation Groupings in a Theater of Military Operations in a Non-Nuclear Period

SOURCE Documentary

Summary

The following report is a translation from Russian of an article which appeared in Issue No. 2 (87) for 1969 of the SECRET USSR Ministry of Defense publication Collection of Articles of the Journal "Military Thought". The author of this article is Colonel G. Lebedev. This article discusses the tactics of the Soviet Long Range Air Force against enemy air bases under conventional warfare conditions. The only aircraft mentioned is the TU-16, in both number and missile-carrying variants. Some of these aircraft have nuclear loads and are concealed for the eventuality of transition to nuclear warfare. Assuming the dawn and twilight hours to be the most favorable times for attack, the author elects to attack at twilight, when only a few crews are on duty to mount a counterattack. Neutralization of enemy air defense is viewed as very difficult under conventional warfare conditions: The author recommends the use of a narrow flight path to targets, after air defenses along that path have been hit by strategic and tactical aircraft.

End of Summary

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Comment:

There is no information in available reference materials which can be firmly associated with the author. Military Thought has been published by the USSR Ministry of Defense in three versions in the past--TOP SECRET, SECRET, and RESTRICTED. There is no information as to whether or not the TOP SECRET version continues to be published. The SECRET version is published three times annually and is distributed down to the level of division commander.

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The Defeat of Enemy Aviation Groupings in a Theater of Military Operations in a Non-Nuclear Period

by
Colonel G. Lebedev, Candidate of Military Sciences

The problem of defeating enemy aviation groupings in theaters of military operations in a non-nuclear period is extremely urgent at present. It is no coincidence that this topic is being examined in a number of articles in the journal Military Thought. It was covered most fully by General-Mayor of the Air Force G. Yarotskiy.* It seems advisable to express an opinion on several problems in the planning of air operations to defeat aviation groupings and in the conduct of combat actions in air operations by forces of long-range aviation.

First of all, we shall note that General G. Yarotskiy's approach to determining the long-range aviation forces required for a simultaneous strike against all active enemy airfields can hardly be considered correct. Estimates show that for the destruction at an airfield of sixty percent of the bombers or tactical fighters of one squadron, a test range group must comprise five or six TU-16 aircraft with OFAB-250 bombs, or four or five aircraft with RBK-500 bombs. If one takes into account that, as a rule, one air wing is based at an airfield, an air regiment should be assigned for each airfield, since some of these aircraft (six to nine, but not a detachment) will be supporting the activities of the strike groups (final reconnaissance, illumination and marking of targets, radio-jamming cover for bombers). An attack on a large air base which has up to two air wings deployed on it, requires no less than two air regiments. Furthermore, from the experience of combat training of long-range aviation units we know that two strikes on a landing strip require allocation of up to six TU-16 aircraft with FAB-500 bombs, and three strikes require eight to ten aircraft. Hence, it is evident that the combat capabilities of long-range aviation units are limited in action with conventional weapons. Therefore, the mission cannot be accomplished by one strike, but only by conducting an air operation to defeat an air grouping by using long-range and front aviation forces. By defeat we mean the destruction of up to fifty to sixty percent of the enemy aircraft at airfields and in aerial combat.

*Collection of Articles of the Journal "Military Thought" No. 3 (85), 1968.

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Since an air operation to defeat an air grouping with conventional means of destruction can be conducted in two or more theaters of war, to achieve the goal of the operation requires that long-range aviation use part of its forces to hit targets first in one theater (axis of the theater), then in the others. Massed strikes must be combined with echeloned actions of small groups of aircraft to neutralize and harass the enemy. In a number of instances long-range aviation units will be forced to move and land at airfields of another large unit, or of another branch of aviation, and immediately commit their forces to battle. At times it may become necessary to redeploy to another theater of military operations.

In order to attain the more critical objectives of an air operation it is necessary to find ways of increasing the combat capabilities of long-range aviation large units and units. One of the important measures for increasing the effectiveness of long-range aviation aircraft operations with conventional bombs is to equip them with auxiliary suspension systems, which permits an increase in the bombload. The echelon with conventional weapons can also be reinforced by releasing part of the TU-16 aircraft from the nuclear echelon when using a combined suspension system of nuclear means (missiles and bombs); by selecting more effective types of air munitions in relation to specific tasks; and by mixing the loads of TU-16 aircraft of the non-nuclear echelon.

A very important consideration in planning combat actions is the organization of the transition from actions with conventional weapons to actions using all means of warfare. The main attention should be focused on ensuring continuous high combat readiness of the nuclear echelon in the non-nuclear period, protecting it from enemy strikes, and increasing the reliability and efficiency of the control of its forces.

To accomplish these tasks requires a whole series of measures. The viability of the nuclear echelon may be ensured, in our view, first and foremost by its concealed withdrawal to dispersal airfields, apart from non-nuclear subunits if possible. During the take-off of aircraft with conventional weapons it is important to conceal the presence and basing of the nuclear echelon on the ground and to give the appearance that all long-range aviation forces are participating in the delivery of a massed strike. This may be accomplished by skilful radio deception and camouflage. To conceal our forces and means from the enemy in the last war we made use of weather conditions, hours of darkness, background camouflage of terrain, dummy airfields, and other factors. These measures have not lost their significance even now. It may even make sense

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to fully or partially change the basing of the nuclear echelon during combat actions with conventional weapons.

It is also imperative to resolve the problem of how to use the non-nuclear echelon in a situation in which combat actions are initiated with the use of nuclear weapons, or in which the echelon is in the air and carrying out a previously assigned mission when it receives the command to use these weapons.

In our view, in planning the actions of the non-nuclear echelon, consideration must be given to two tasks, the fulfilment of which depends on the time the orders are received to use nuclear weapons. If, when these orders are received, the echelon is on the ground and has conventional weapons suspended, then steps must be taken to prepare it for the nuclear variant. If it takes off for actions with conventional weapons and reaches enemy territory, it should continue to carry out the mission. However, if the aircraft have not reached the front line, it is desirable to return them and replace their munitions. Thus, because of its readiness at take-off, this echelon is like a second nuclear echelon.

The article by G. Yarotskiy states that in an air operation to defeat an aviation grouping the first massed strike should be planned thoroughly and in detail. We think that actions involving the use of conventional weapons require detailed planning for the whole operation, or, in any case, the first day. And the second massed strike by long-range aviation forces (selection of targets of actions, organization of overcoming air defense) may be planned in advance in as much detail as the first. This will allow crews to spend the minimum amount of time in preparing for the next take-off. The clarification of targets by individual subunits and crews is not excluded from this planning.

The most complicated and important task carried out in support of the first long-range aviation strike is the final reconnaissance of targets, which will preclude strikes against unoccupied airfields. Its planning must provide for the arrival of reconnaissance crews at the targets early enough to ensure the timely and accurate guidance of strike groups to the targets. This is achieved not only by having the reconnaissance crews take off sooner, but also by having them operate from the forward airfields of front aviation. Reconnaissance crews, as a rule, overcome air defense independently.

The basic method of final reconnaissance of airfields still is visual observation, supplemented by aerial photography. Radio-electronic reconnaissance can detect operating airfields by the

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radio communications means working at these airfields. Final reconnaissance results must be transmitted immediately by ultrashort-wave radio communications through relay aircraft to the aircraft of strike group commanders, as well as to the command posts of long-range aviation large units and units and to interested staffs.

It is possible to have different variants of the commencement of combat actions in an air operation to defeat aviation groupings: at dawn or thirty minutes to an hour before dawn; before nightfall and at night.

In a war game conducted by the Commander-in-Chief of Air Forces in 1968, the "East" forces delivered the first massed strike against enemy aviation at dawn. Such a variant has a definite advantage. One of its shortcomings is that at the beginning of combat actions the enemy can call upon up to seventy-five to ninety percent of his aircraft and use them throughout the daylight hours against our airfields and other targets. Even in a situation in which the first massed strike by our aviation is delivered against fifteen to twenty airfields in that theater, retaliatory strikes by an enemy with large aviation groupings can be quite significant.

During the daylight hours our front aviation can deliver up to three massed strikes, but we must not forget that up to ninety percent of enemy aviation in the Western Theater of Military Operations is based at a depth of more than 200 kilometers, i.e., beyond the maximum range of our fighter-bombers and fighters. At the same time, the forces of long-range aviation will deliver no more than one massed strike at dawn, if it is calculated to be a surprise strike. The second strike can be carried out seven to nine hours after the first; however, long-range aviation units will be forced to wait for nightfall and run the risk of enemy air actions against their airfields.

In determining the time when aviation combat actions should commence, and if the initiative lies with us, very careful consideration should be given to the duration of daylight and nighttime hours. If there is less daylight than nighttime, it might be advisable to begin combat actions in the pre-evening twilight hours (the "evening" variant). What does this achieve? First, the maximum forces of front and long-range aviation are used in the initial massed strike. The enemy can use only night crews in his retaliatory attack (up to twenty-five percent of the tactical aviation forces). Second, long-range aviation forces take off at minimum intervals and will be able to deliver one or two additional massed strikes during the hours of darkness.

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It is not possible to agree with the opinion of G. Yarotskiy on the necessity for neutralizing SAM batteries and other air defense means in all of the areas of operations of front aviation and in all of the flight zones of long-range and military-transport aviation. One of the characteristics of operations using conventional strike means is that it will be impossible to exert any real effect on enemy air defense objectives even if the initial massed strike includes up to forty percent of our fighter-bomber and fighter forces. For this reason, it is advisable that large units, not only of long-range but also of front aviation, fly to their targets within a limited number of flight corridors of limited width on the strike axis of the main forces, in which enemy air defense means can be neutralized. This situation will also affect the determination of the strike targets to a certain degree, in the sense that they will have to be selected in individual areas and not throughout the theater. It must also be taken into account here that lowering the combat capabilities of our units will decrease not only the number of targets struck but also the depth of the strike and the width of the zone of operations along the front line; and the organization for overcoming air defenses will have to be changed.

The experience of exercises shows that the forces of long-range aviation must overcome the air defense in a theater of military operations in one or two narrow zones up to fifty to sixty kilometers in width, and along several routes in each zone (at safe intervals of ten to fifteen kilometers between them). Thus, if one zone runs through a SAM battery grouping, then the other must, if possible, go around a large grouping of air defense means (over a sea or over a mountainous region). In overcoming the air defense of a pre-frontal zone in a narrow sector, it is possible to set up high-density radio-jamming; and this reduces the number of targets against which action must be taken. Under these conditions it is important to concentrate the efforts of front aviation on the neutralization and destruction of Hawk batteries and fighter airfields. SAM fire zones must be overcome by flying at low and very low altitudes, which precludes counteraction by Nike-Hercules SAM batteries and reduces the capabilities of Hawk batteries. Minimum losses from fire by the latter are sustained when the time intervals between aircraft in a combat formation are no more than ten seconds.

In some instances air defense targets in the flight path of the main forces of long-range and front aviation must be neutralized by long-range aviation missile carriers. To achieve this it is desirable to use a regiment of TU-16 aircraft with a combined

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suspension of weapons (missiles with passive homing heads, and bombs). Such a regiment can use missiles to neutralize the radar stations of control and warning centers and posts, and the stations providing target designations to SAM batteries; and it can use aerial bombs to destroy enemy fighters at airfields and SAM fire batteries. As estimates show, the proper complement of a tactical group assigned to destroy (neutralize) air defense means is two detachments with a combined suspension of missiles and bombs and one detachment with jamming means to cover the missile carriers. Such a group can put two or three targets out of action in the following variants: a control and warning post and a fighter airfield; a control and warning post and a Nike-Hercules battery; or two Nike-Hercules batteries. The neutralization of these batteries is important for units of both long-range and front aviation, when it is required to support the flight of aircraft at medium and high altitudes to attain maximum range, and also to support the actions of missile carriers against targets protected by such SAM. As a whole, a missile-carrier air regiment using conventional weapons can neutralize up to six to nine air defense targets.

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